How the Intelligent Dairyman Should Improve His Stock.

MANUFACTURE OF GRINDSTONES.

Automatic Locking Envelope to Stop the Habit of Licking.

INDIA RUBBER TIRES FOR BICYCLES

IWRITTEN FOR THE DISPATOR 1 The need for better cows for the dairy is coming to be very generally appreciated. Statistics collected in Iowa show that the average cow in that State gives but 3,000 pounds of milk annually, while good ones yield from 5,000 to 5,000 pounds. How unequal is the supply of butter is shown by the fact that in the State of Vermont the 30 dairies in the State that average over 300 pounds per cow. Some most important facts were recently brought out by a series of experiments with 12 cows, among which were Jersey, Ayrshire, Devon, Durham, Dutch and native cows, under the auspices of the Department of Agriculture. The most profitable cow was bought for \$60, fed 884 days, and then sold for \$28, making her actual cost \$32, and the feed cost \$135 05, so that the total cash outlay was \$167 05. The milk brought \$203 35 at the creamery, and the manure was estimated to be worth \$56 93, making the total value received for feed consumed, \$260 30. Subtracting the cash outlay of \$167 05 from this, there remains \$93 25 as not return for feed consumed. Deducting the estimated value of the manure, the remainder, "return in excess of estimated value of the manure," is \$36 32.

In the average for the 12 cows, the net retracting the value of the manure, the total loss was \$34 25; that is to say, allowing for the value of the manure, the results with the 12 cows varied from a gain of \$93 to a loss of \$3 27; or, if the value of the manure be left out of secount, from a gain of \$36 82

depend upon either the breed or the length dered flint, powdered emery or corundum of the feering period. The most profitable and rubber dissolved by a suitable solvent cow and the least profitable but one were both of the same breed. Of the two most together, form a substance that is exceed profitable cows, one was fed for 584 days and ingly jurable, and that will, when used for the other for only 278 days. Two things are sharpening tools, outwear by many years brought out clearly by these experiments.

One is that in certain localities the value of During the process of m the manure goes far to decide the profit in feeding dairy cattle. Another is that cows which would ordinarily pass for good ones may differ widely in product. To the practical dairyman, however, they teach the difference between cows which are profitable and those which are not, and the importance of selecting the best cows and getting rid of the poor ones; in other words, or being ther-oughly cognizant of the issues upon which the success or failure of his business de-

Increasing Use of Rubber Tires.

The application of rubber to wheel tires has proved a great boon to bicyclists, and the increase in this branch of industry is remarkable. There are 100,000 bicycles made every year in this country, and 40,000 more are imported. As all these have tires of the best rubber, it can be seen that a good percentage of the world's supply is absorbed in this way. Each tire weighs on an average between three and four pounds, and this together with renewals involves a yearly consumption of not far from 1,000,000 pounds. The solid tire was first used, but the cushion and the phenuatic are now the popular torms. Each of these, however, is being further modified and improved, and the comfort of bicycle riding is being daily in-creased. The cushion tire is not liable to puncture, and takes the jar well, but its weak point at present is its liability to crack at the sides in the interior.

The pneumatic consists of a rubber tube

jacketed in a stout canvas sack, which prevents its being ourst from overinflation and other accidents. The whole is covered with a larger encasing tube of rubber. The canvas sack is comented to the outer rubber tubing, and the interior is inflated by an air valve. This form of tire, which is not yet perfected, has the advantage of being easily repaired by the rider in a few minutes by the roadside. The repairing outfit consists of a hidden pressure tube filled with quickdrying solution, rubber for patches, and a supply of canvas. These adaptations of rubber cuable the rider to travel long distances, day after day, with but little ili-effect from the concussion which once affected so materially the health and comfort

To Imitate Mahogany,

In the manufacture of furniture it is often found that excellent results both in econand effect are gained by the ability to imitate valuable hardwoods. The French artisan is especially skilled in this art, and will produce a surface so like the wood imitated in texture, density of hue and polish that many expert judges will often mistake the imitation for the natural wood. The ap-pearance of manogany is given by the fol-

lowing process: The surface of the wood having been made perfectly smooth, diluted nitrous acid is rubbed in. To a filtered mixture of one and a half cunces of dragon's blood, dissolved in a pint of spirits of wine, is added one-third that quantity of carbonate of soda. This gives a very thin liquid, which is brushed with a soft brush over the wood. The process is repeated, and shortly the wood assumes the external appearance of mahegany. If the composition has been properly made the surface will resemble an artificial mirror, and should this brilliancy at any time be impaired, it can be restored by rubbing the surface with a little cold-drawn linseed oil.

That the importance of a smokeless fuel to the public in general and to the manufacturer in particular is recognized is shown by the fact that new methods of producing it are constantly being devised. A product of this kind has been tested in England, with promising results. The fuel consists of dust or waste coal reduced to a fine pow-der, and then incorporated with a small proportion of pitch and some other mineral substances to the extent of from 7 to 10 per cent, according to the nature of the coal used. It is then, white in a plastic condition, molded in presses, where it is submit-ted to a pressure of two tons to the square inch, and sasumes the form of briquettes about 8 inches long by 5 inches wide and 4

It is stated that the mineral ingredients thus added produce during combustion a gas which not only consumes the smoke that emanates from the coal, but also all noxious fumes. The sulphur is said to be rendered innocuous, and the heat engendered to be greater than that produced by ordinary coal

Feeding Fornaces With Sawdust.

The consumption of sawdust and shavings in sawmills effects a great economy in fuel. While sawdust is easily handled, the larger chips from planers are not so readily disposed of, and are often so bulky that if manipulated in the ordinary way much labor is entailed. An ingenious mode of overcoming this difficulty has been introduced, consisting of a system of ventilation and boiler firing that removes all the claps and dust from the machines, transports them to a special building and thence carries a supply to the boilers. The whole sys

Danger in Licking Envelopes The public is frequently warned by the medical profession of the danger which lurks in the practice of damping the gam on envelopes with the tongue, and notwith-standing the many cases of virulent and

serious diseases, especially of the syphilitic type, which have been traced to such an origin, the practice is still almost universal. Among attempts which have been made to provide a means of escaping the necessity of licking the envelope is an automatic lock envelope, which has just been patented. On the flap of the envelope are two projecting flanges and all that is necessary to close the envelope is to fold these flanges by clearly denoted lines, and insert the flap thus narrowed in a slot, whereupon the solded flanges automatically lock themselves and the en-velope cannot be opened without being torn. The operation sounds much more complicat-ed than it really is, for one of the new envelopes can be closed as readily as the better

known gummed envelope. Still another remedy is a patent machine average yield of butter per cow is only which moistens the open flaps of envelopes about 130 pounds per annum, while there are and similar articles drawn through it. This consists of a reservoir with convexed undersurface, which is attached to the vertical member of a frame. When the gummed flap of an envelope is passed under a sponge which extends slightly downward within an opening in the base of the frame, a spring arm is slightly lifted and raises a plug, allowing water to enter the reservoir and permitting its flow through the sponge, which is thus kept in a thoroughly moist condition. The immediate return of the plug to its position by the spring arm, after the envelope has been passed through, prevents further flow of the moistening fluid.

To Clean Dull Gold.

A correspondent who has found difficulty in restoring the color of dull gold will find advisable the use of a solution consisting of say 3 quarts of distilled water in which 80 grams calcium hypochlorite, 80 grams turn was \$50 43, and the return in excess of sodium bicarbonate and 20 grams table salt the estimated value of the manure, only \$15 13. With the least profitable cow, the cash outlay for cow and feed exceeded the value of the milk and manure by \$3 97; in other words, the net return for feed consumed was \$8 97 less than nothing. Subtracting the value of the manure the total consumed was \$8 97 less than nothing.

Vulcanite Grindstones.

The manufacture of artificial grindstones now constitutes a very important industry in this country, The materials used in this to a loss of \$34 25.

It was found that the profit or less did not manufacture are pulverized quartz, pow

STATISTICS ON MILK. tem is entirely automatic and is under simple and perfect control. very often rendering the covering of the mixers with a sheet-iron bood necessary. The compound is afterward calendered into

sheets of one-half to three inches thick, shaped up and carefully vulcanized, and the process is completed by the wheels being trued up with tools made especially for the purpose. These wheels are used for the finest sort of grinding and polishing purposes.

Quilter for Sewing Machines.

A very useful addition to the sewing machine has appeared in the shape of a quilting frame. This device can be easily adjusted to hold a quilt in convenient position for being worked on, and so that it can be readily adapted to the feed of any sewing readily adapted to the reed of any sewing machine. The frame supporting the quilt may be brought in an instant into any de-sired position, the suspended frame moving freely, and the device permitting of such arrangement in connection with a sewing machine that the feed of the machine will draw the quilt and frame through it. The device can be adapted to all sizes of ma-chines and for the quilting of any desired

Protect Your Health.

Protect Your Health.

Cold and moisture combined have a torporising effect upon the bodily organs, and the digestive and secretive processes are apt to be more tardily performed in winter than in the fail. The same is true, also, of the excretory functions. The bowels are often sluggish, and the pores of the skin throw off but little waste matter at this season. The system, therefore, requires opening up a little, and also purifying and regulating, and the safest, surest and most thorough tonic and alterative that can be used for these purposes is Hostetter's Stomach Bitters. Persons who wish to escape the rheumatic twinges, the dyspeptic agonies, the painful disturbances of the bowels, the bilious attacks and the nervous visitations so common painful disturbances of the bowels, the binous attacks and the nervons visitations so common at this time of the year, will do well to reinforce their systems with this renowned vegetable stemachic and invigorant. It improves the appetite, strengthens the stomach, cheers the spirits and renovates the whole physique.

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During the process of mixing and kneading there is a constant escape of tar fumes, HAUGH & KEENAN, 33-34 Water street. Su

Those inventors who apply "early and often" reap the harvests, and among those who fellow this maxim are found the names who fellow this maxim are found the names of some well-known Pennsylvanians: A. E. Dain, Pittsburg, bottle stopper; L. S. Flatau, Pittsburg, whiffletree; C. L. Goegring, Allegheny, molding machine; P. Lange, Pittsburg, wall socket for incandescent electric lamps; James Morgan, Pittsburg, feed table for rolling mills; George Westinghouse, Jr., Pittsburg, electric locomotor; G. W. Blair, Pittsburg, lamp chimney. Reported by Higdon & Higdon, patent attorneys, 127 Fourth avenue, Pittsburg.

HONITON AWNINGS-At Mamaux & Son's, 539 Penn avenue.

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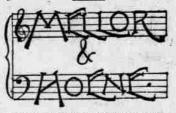
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family as they fly upward? Anyway, we all admit that they are a great source of trouble, especially in the matter of dress. They are constantly outgrowing or out-kicking their suits.

We can save you much trouble on their account if you'll let us. We have made the ubject of Boys' Clothing a study from the time when they don their first kilt up to the hour when they stand on the threshold of manhood and ask the old man for the last time to put up for a new suit. Scores of styles

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We lead them all. And in doing so we furnish an elegant object lesson of the old adage that "real merit wins." Real merit asks and demands a hearing; it gets it. It does not go around the world complaining that the world owes it a living; it simply presents its bill and collects at sight. The people have recognized the merit of our goods and prices and our endeavor to serve them honorably by according to us a very liberal share of their natronage



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the largest and most varied stock at prices which not even inferior goods can beat. The Sack in many shapes, the Frock in as many more, the Single and Double-breasted Prince Albert, and the Full Dress are all represented, and the representation is so large and varied that everybody can be pleased and suited. Just at present light colors have the call, and we have an immense as-

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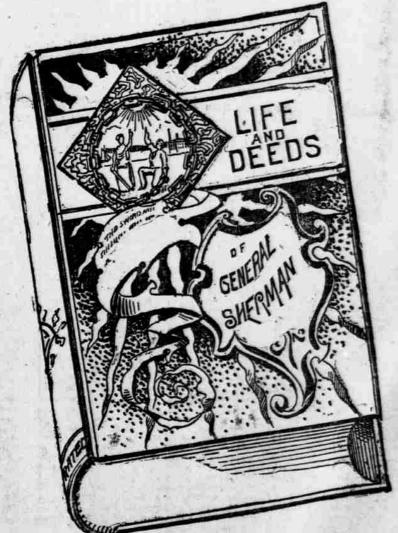
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